Catch on to Computers

with Alfie,
the Alpha-Bits Cereal Wonder Dog

Catch
on to
Computers
with
ATARI®
Logo

Empty screen of Autumn
Whirl pattern and color
Rainbow turtles

Create with me.

Jane Nissen Laidley

1

Make sure the ATARI Logo cartridge is in the cartridge slot. Turn on the TV and the computer.

Look at the screen. The ■ you see is called a cursor. It means that the computer is waiting for instructions from you. Anything you type will appear at the cursor.

The keyboard in front of you is set up like a typewriter except that it has a few extra keys that let you give special commands to the computer.

The RETURN key tells the computer, "Do what I just typed."

The BREAK key tells the computer, "Stop."

The DELETE key tells the computer to erase the letter or number to the left of the cursor.

Your teacher can show you how the other keys work, or you can try them on your own. But do this first...

To write your name on the screen
type   PRINT [your name]
press RETURN
(Your teacher will show you how to type [and] if you don't know how.)

There you are!

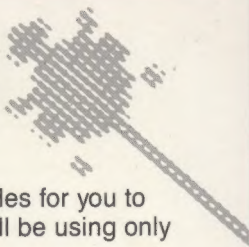Now type PRINT [your name, but this time type the last letter wrong]

Do not press the RETURN key yet. Press the DELETE key twice. Then type the correct letter and now press the RETURN key.

Now you know how to change things before you press the RETURN key! Be sure to ask your teacher if you see a mistake after you've pressed the RETURN key.

2 Meet the Rainbow Turtle

ATARI Logo has four turtles for you to command, but today we'll be using only one of them.

Type   **ST**
press   **RETURN**
There's the turtle.
Which way is it facing?
ST means Show Turtle.

To move the turtle
type   **FORWARD 50**
press   **RETURN**

What happened?
The number 50 here means 50 turtle "steps." You can also move the turtle back by typing **BACK**

The turtle can turn right or left.
Type   **RIGHT 45 FORWARD 50**
press   **RETURN**

What did the turtle do for you?
The turtle turns in measurements called degrees. A complete circle is 360 degrees. The number 45 here is a part of a circle.

The ATARI turtle can also "travel" on his own.
type   **SETSP 100**
press   **RETURN**

SETSP means Set Speed. 100 is the speed at which the turtle moves. You can set the speed anywhere from 0 to 199. To stop the turtle, type **CS** or **SETSP 0**

Now try moving the turtle in different directions with varying speeds using what you have already learned. Remember to press **RETURN** to tell the computer you want it to do something.

Let's teach the turtle to make a triangle △ and ask Logo to remember how to do it.

Type this exactly as it is shown here. Remember to press **RETURN** at the end of every line.

Type   CS (This means Clear Screen.)
```
TO TRIANGLE
FORWARD 70   RIGHT 120
FORWARD 70   RIGHT 120
FORWARD 70   RIGHT 120
RIGHT 18
END
```

Now type TRIANGLE and watch the turtle!

Type TRIANGLE again and again to make a new drawing. You'll see that Logo has learned how to do this "procedure" and remembers its name.

It's simple to teach Logo to draw that design a lot faster. To do it, we'll use TRIANGLE as a simple "building block." Here's how:

Type   CS
```
TO DESIGN
REPEAT 20 [TRIANGLE]
END
```

Ready? Then type DESIGN

This new procedure teaches the turtle to do the TRIANGLE procedure twenty times. As you see, the turtle turns 18 degrees before making a new triangle. By turning 18 degrees twenty times, the turtle completes a 360 degree circle. ($18 \times 20 = 360$)

Your turtle can draw in any one of 128 different colors! It's simple to change colors. Just type SETPC 0   any number between 0 and 127

SETPC tells your turtle (Number 0) to draw in a certain color. The last number—the one you chose—is a color identification number. Why not try this several times with different numbers at the end? Can you find your favorite color?

Here's a special procedure that shows all 128 colors very fast. Type it exactly as it looks here:

```
TO COLORS :COLOR
IF :COLOR = 127 [PRINT [THAT'S ALL,
   FOLKS!] STOP]
SETPC 0 :COLOR
WAIT 15
COLORS :COLOR + 1
END
```

The : in this procedure means that the color identification number can change. This is called a variable. It also means you have to tell the computer a number when you give this kind of command. To see how this works, type COLORS 0 (The 0 starts you at the beginning of the rainbow.)

3 The turtle can also sing!

Explaining how to teach the turtle to sing isn't hard, but it would take more time than we have here today. So just type this like we show it here. (Maybe you'll see some things that look like the COLORS procedure.)

Type
```
TO SING :FREQUENCY
IF :FREQUENCY > 2000 [SING 15]
SETENV 0 1
TOOT 0 :FREQUENCY 12 10
SING :FREQUENCY + 25
END
```

Now let's put all these "building blocks" together into one big show!

Type
```
TO BIGSHOW
CS
DESIGN
COLORS 0
SING 15
END
```

Type BIGSHOW

When you've heard enough "turtle singing," press the BREAK key.

If you have time, you may want to try your own designs. If you do, type CS to clear the screen first. Then tell the turtle new ways to go, new colors to use, maybe even a new song to sing.

Just experiment and have fun. That's what ATARI Logo is all about!

TO PARENTS AND TEACHERS

Logo is a computer programming language developed after many years of educational research. Its power lies in the ability to demonstrate profound concepts in a few simple procedures. ATARI Logo lets students "talk" with a computer as they would with a friend. In the very first session, students can start creating designs, editing text, and getting comfortable with computers, programming and logical thinking.

ATARI Logo is designed to link learning, thinking and experience. Ask the students of CATCH ON TO COMPUTERS to show you how ATARI Logo works.

ATARI Logo was developed and manufactured for Atari, Inc., by Logo Computer Systems Inc.

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